



**The Actuarial Profession**

making financial sense of the future

Life Conference 2012

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# Longevity Catalysts

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# Road map

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- Today's Challenge
- What.....?
  - is the overall aim?
  - if this was already in place?
- How..... ?
  - could one improve existing approaches?
  - do you propose to formulate catalysts
- Where..... ?
  - are any examples formulated to date?
  - can I find out more?
  - can I take the survey and read the literature?
- Who..... ?
  - can I contact to discuss / find out more?

# Today's Challenge

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**We asked 100 people to name one future event that would have greatest impact upon UK longevity.....**

A large green square containing a white question mark.A large green square containing a white question mark.A large green square containing a white question mark.

# Definitions

A **Future Longevity Catalyst** is defined as an event with the following properties

- An event which has not yet occurred
- Its occurrence should be unequivocal and take place at a unique point in time
- Its occurrence is widely expected to lead to a demonstrably significant and positive effect on life expectancy

A **Past Longevity Catalyst** is defined as an event with the following properties

- An event which has already occurred
- Its occurrence is expected to lead to (or has already led to) a demonstrably significant and positive effect on life expectancy

# What if?

## Potential Uses

- Hedging
- ICA / SII
- Best estimate approach
- Greater appreciation of
  - dormant risks
  - existing exposure
- Other



## Properties

- Objective
- Acid test
- Imperfect



# What if?

## Current practice

- Baseline
- Improvements derived from historic data



## Proposed approach

- Baseline
- Improvements derived from historic data
- Schedule of future events or catalysts

Can co-exist with current practice

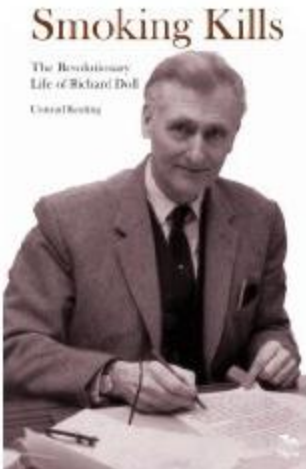
# What problems can we help to address?

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- Challenges of extrapolating the past
- Longevity is a lagged process, as shown by smoking and cancer/heart disease.
- Some effects are already in the pipeline, but poorly understood
- Others will emerge in future. But what could they be?
- Longevity risk protection capacity is limited in insurance market. How can we make greater use of capital markets?

# The pipeline can be long but well signposted

1950



2007



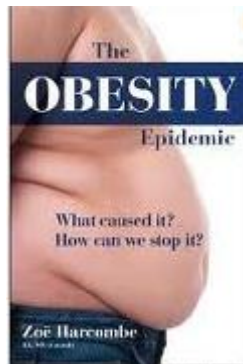
57 years!

1994



**The National Lottery**  
Life changing®

1983: Statins —  
now the world's  
best selling drug



1999

**cycle2work** 

1999



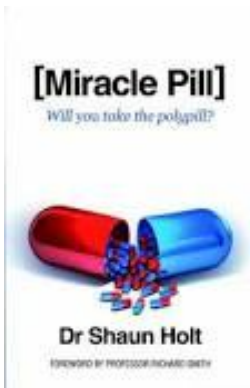
2003



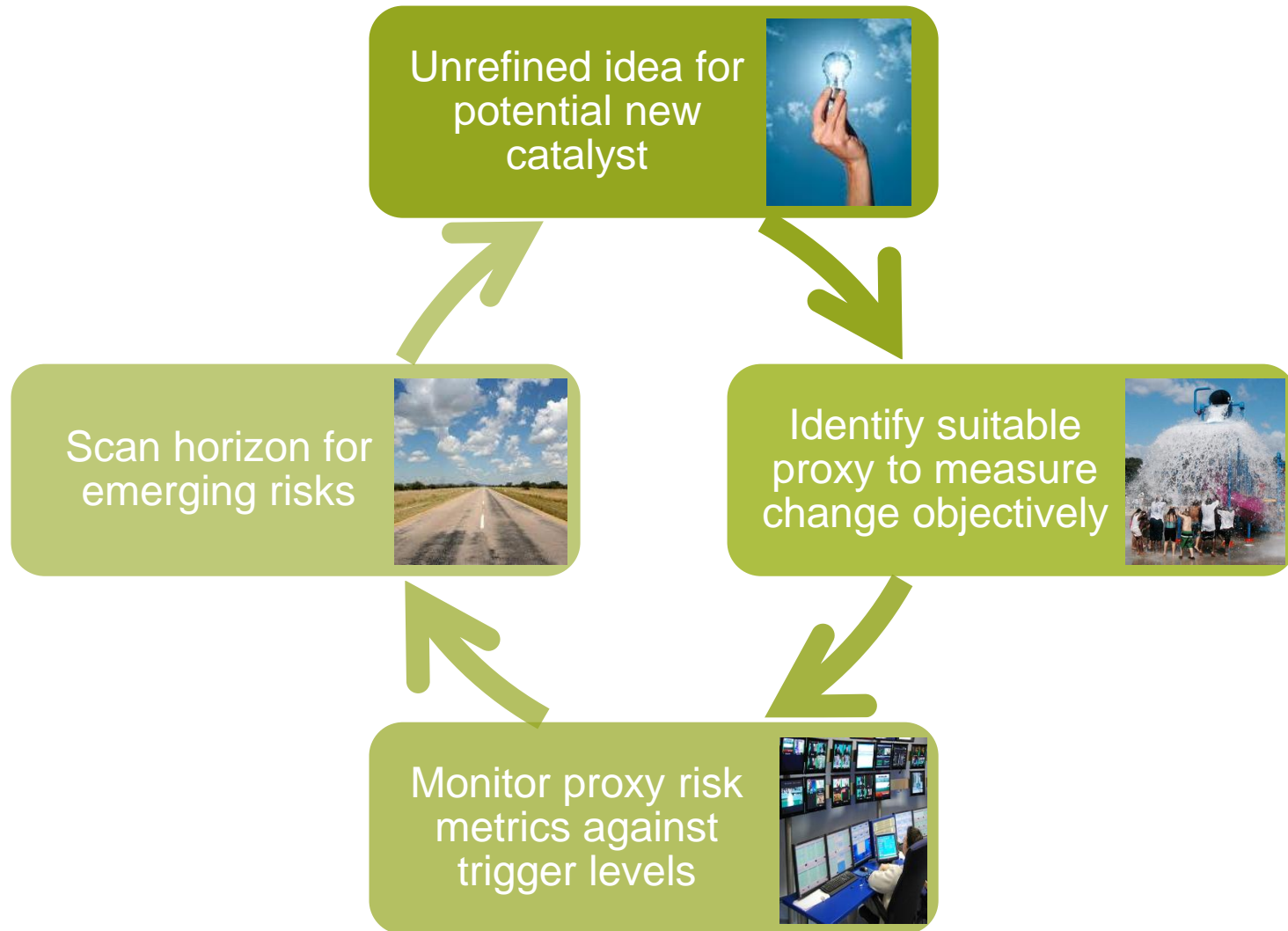
Just Eat More  
(fruit & veg)



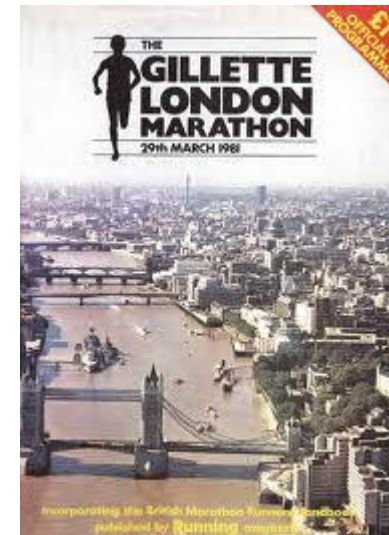
# In our lifetimes?



# Catalysts governance process

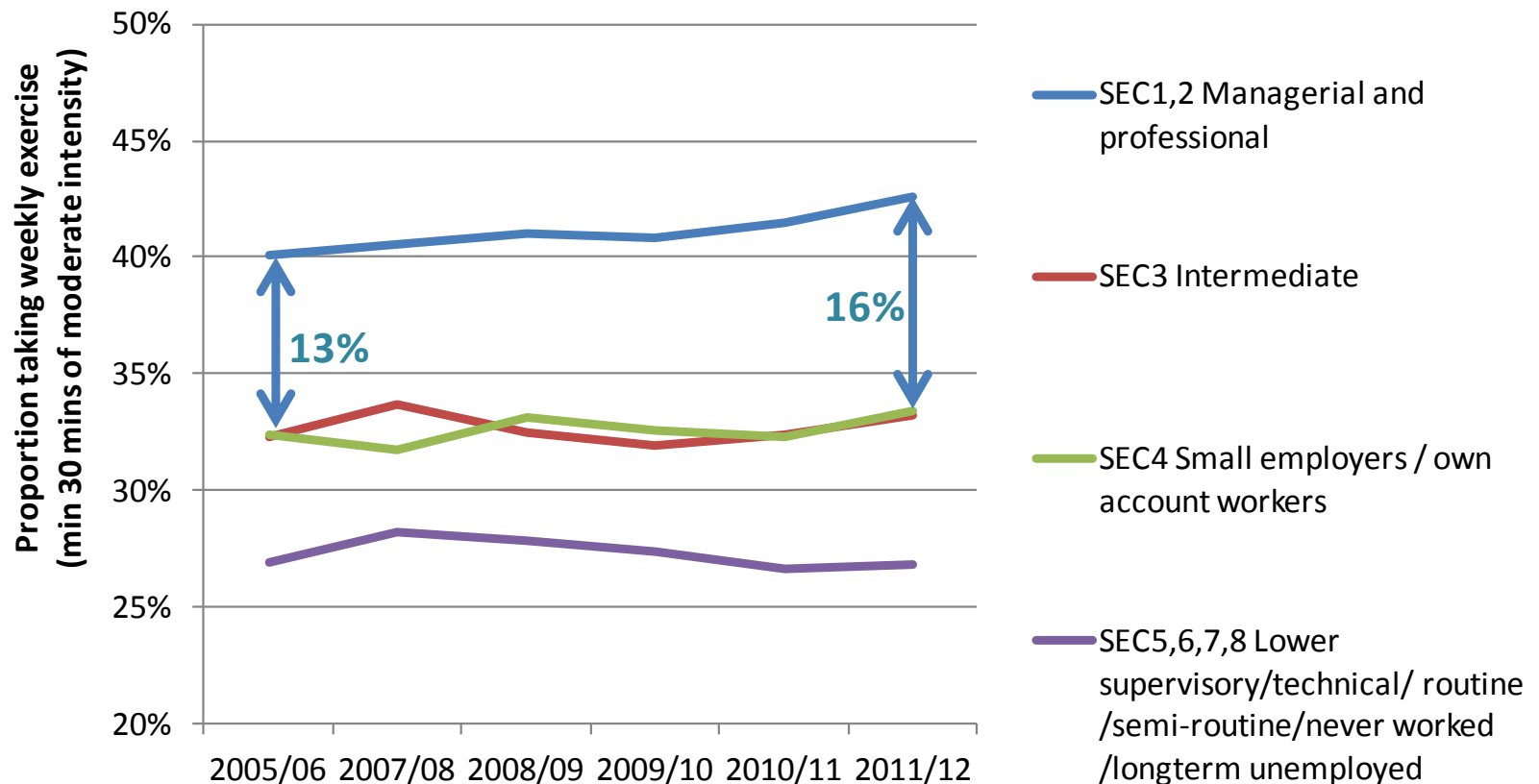


# An example: The Mamil syndrome



# A possible proxy measure

## Less sedantry higher SECs



Source: Sport England, Active People Survey



# A creative thinking aid

Environmental

Medical

Political

Economic

Religious

Other

Regional

Social



# Possible Examples

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- **Future Longevity**
  - FDA approval of [drug X] which is one of the [N] drugs currently going through the FDA approval pipeline process
- **Past Longevity**
  - Smoking banned in workplaces and enclosed public places resulting directly from the Health Act 2006
  - Publication of medical paper clearly demonstrating the statistically significant link between cigarette smoking and excess mortality

# Possible Examples



# Possible Examples





# Possible Examples



# Possible Examples



# Possible Examples



# Possible Examples

## Solvency II delay beyond 2014 likely as talks fail

Crucial talks amongst European politicians and civil servants to clear the way for the implementation of the regulatory regime Solvency II appear to have failed, making the scheduled 1 January 2014 start date increasingly unrealistic.

Representatives from the European Council, Parliament and Commission are meeting this week to finalise the wording of Omnibus II legislation, without which

pushing it out to 2015 or even 2016.

The European Insurance and Occupational Authority (EIOPA) was commissioned in July to carry out an independent study of the various schemes on long term guarantee measures and to make recommendations to European authorities by March 2013.

However the European Parliament

# Become involved

1. Read the literature which includes possible examples (email us for a copy)
2. Take the survey yourself
3. Link here <https://www.surveymonkey.com/s/6N99H7P>
4. Recommend others
5. Receive updates



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# It's your turn!

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# Contact details

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